

**REMARKS**

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

**Disposition of Claims**

Claims 1-10 are currently pending in this application. Claims 1, 6, and 9 are independent. The remaining claims depend, directly or indirectly, on claims 1, 6, and 9.

**Claim Amendments**

Independent claims 1, 6, and 9 have been amended to clarify that the dust pressed and formed occurs in exhaust gases within a melting furnace during an iron and steel manufacturing process, and that the dust is subsequently collected by a dust collector. Support for this amendment may be found, for example, in page 7, lines 18-22, and page 13, lines 14-15 of the original specification. The remaining claims have been amended for clarity purposes. No new matter has been added by way of these amendments.

**Rejection(s) under 35 U.S.C. §102**

Claims 1-3, and 6-8 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,645,719 ("Minnick"). To the extent that this rejection may still apply to the amended claims, this rejection is respectfully traversed.

Referring to the detailed description for purposes of illustration only, embodiments of the present invention are directed to a steel manufacturing dust, and a manufacturing apparatus therefor, that utilizes a dust, occurring in exhaust gases within a melting furnace during an iron and steel manufacturing process and subsequently collected by a dust collector, and containing iron as a

principal component (*see, e.g.*, page 7, lines 18-22, and page 13, lines 14-15 of the original specification). This allows for reuse of the abovementioned dust as an iron and steel manufacturing raw material (*see, e.g.*, page 1, lines 5-8 of the original specification).

Accordingly, amended independent claims 1 and 6 require, in part, the process of pressing and forming a dust “occurring in exhaust gases within a melting furnace during an iron and steel manufacturing process and subsequently collected by a dust collector, and containing iron as a principal component.”

Minnick is directed to a steel-making process where dolomite is charged to a furnace as a basic slag-forming ingredient, the improvement being the intimate mixing of dolomite with iron oxide prior to charging (*see, e.g.*, col. 3, lines 38-47). The iron oxide is mixed in the dolomite for the purpose of modifying the slag subsequently formed. Thus, although one object of the invention of Minnick is to provide an improvement in a steel making process by utilizing waste iron oxide-rich dust as part of the charge (*see col. 3, lines 20-22*), nowhere does Minnick show or suggest the reuse of dust, as recited in the abovementioned limitation of amended claims 1 and 6, *as an iron and steel manufacturing raw material*.

In view of the above, amended independent claims 1 and 6 are not anticipated by Minnick. Dependent claims 2-3 and 7-8, directly or indirectly dependent on claims 1 and 6, are also not anticipated for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 1-4, and 6-8 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent Publication No. 2002/0020108 (“Anderson”). To the extent that this rejection may still apply to the amended claims, this rejection is respectfully traversed.

Anderson is directed to a method of forming combustible briquettes from industrial waste products (*see, e.g.*, paragraphs [0001] and [0007]). The briquettes can then be used as a fuel in a furnace. Thus, the invention of Anderson is quite different from the present invention and nowhere does Anderson show or suggest the reuse of dust, as recited in the abovementioned limitation of amended claims 1 and 6, *as an iron and steel manufacturing raw material*.

In view of the above, amended independent claims 1 and 6 are not anticipated by Anderson. Dependent claims 2-4 and 7-8, directly or indirectly dependent on claims 1 and 6, are also not anticipated for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 1-3, and 6-8 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,921,427 (“Nayak et al.”). To the extent that this rejection may still apply to the amended claims, this rejection is respectfully traversed.

Nayak et al. are directed to a process for cold briquetting and pelletization of ferrous or non-ferrous ores or mineral fines (*see, e.g.*, col. 1, lines 9-12). Prior to charging iron ores into a blast furnace as a raw material for iron and steel, the iron ores are pulverized to form granulates, and then pelletized with a binder (*see* col. 5, line 45 through col. 6, line 61). Thus, the invention of Nayak et al. is quite different from the present invention with respect to the starting material and the desired goal. Additionally, nowhere do Nayak et al. show or suggest the reuse of dust, as recited in

the abovementioned limitation of amended claims 1 and 6, as an iron and steel manufacturing raw material.

In view of the above, amended independent claims 1 and 6 are not anticipated by Nayak et al. Dependent claims 2-3 and 7-8, directly or indirectly dependent on claims 1 and 6, are also not anticipated for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 1-3, and 6-8 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 5,906,671 ("Weinwurm et al."). To the extent that this rejection may still apply to the amended claims, this rejection is respectfully traversed.

Weinwurm et al. are directed to a method for separation and recovery of metals and metal oxides from industrial by-products and waste materials (*see, e.g.*, col. 1, lines 7-10). Thus, the invention of Weinwurm et al. is quite different from the present invention with respect to the starting material and the desired goal. Additionally, nowhere do Weinwurm et al. show or suggest the reuse of dust, as recited in the abovementioned limitation of amended claims 1 and 6, *as an iron and steel manufacturing raw material*.

In view of the above, amended independent claims 1 and 6 are not anticipated by Weinwurm et al. Dependent claims 2-3 and 7-8, directly or indirectly dependent on claims 1 and 6, are also not anticipated for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Claims 9 and 10 stand rejected under 35 U.S.C. §102(b) as being anticipated by Japanese Patent Publication No. JP 07-102302 ("Hiroshi et al."). To the extent that this rejection may still apply to the amended claims, this rejection is respectfully traversed.

Hiroshi et al. are directed to a method for preparing molded green compacts from magnetic powder by using a rubber mold (*see, e.g.,* Abstract). Thus, the invention of Hiroshi et al. is quite different from the present invention with respect to the starting material and the desired goal. Additionally, nowhere do Hiroshi et al. show or suggest the reuse of dust, as recited in the abovementioned limitation of amended claim 9, *as an iron and steel manufacturing raw material*.

In view of the above, amended independent claim 9 is not anticipated by Hiroshi et al. Dependent claim 10 is also not anticipated for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

#### **Rejection(s) under 35 U.S.C. §103**

Claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Anderson. To the extent that this rejection may still apply to the amended claims, this rejection is respectfully traversed.

The invention of Anderson, as discussed above, is quite different from the present invention. Additionally, nowhere does Anderson show or suggest the reuse of dust, as recited in the abovementioned limitation of amended claim 1, *as an iron and steel manufacturing raw material*. Thus, Anderson does not show or suggest all of the limitations of amended independent claim 1.

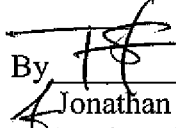
In view of the above, independent claim 1 is patentable over Anderson. Claim 5, indirectly dependent on claim 1, is also patentable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

### **Conclusion**

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 17214/013001).

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Respectfully submitted,

By  #45,079  
Jonathan P. Osha THOMAS SCHERER  
Registration No.: 33,986  
OSHA · LIANG LLP  
909 Fannin Street, Suite 3500  
Houston, Texas 77010  
(713) 228-8600  
(713) 228-8778 (Fax)  
Attorney for Applicant